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PRODUCTIVITY AND DEVELOPMENT OF MANUFACTURING INDUSTRIES IN AFRICA

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INTRODUCTION

This study is part of the work programme adopted by the Joint Conference of African Planners, Statisticians and Demographers at its last meeting held in Addis Ababa from 8 to 17 March 1982.

It has two objectives, namely, to review what statistics are available on the development of manufacturing industries in the region for the period 1970-1980 and to identify and analyse short comings with respect to such data in order to suggest appropriate measures to remedy the situation. In that respect, the ultimate objective of the study should be to establish, as soon as possible, integrated data collection systems which respond not only to the specific requirements of the countries concerned but also to the stipulations of the industrial component of the Lagos Plan of Action.

The first part of the study is devoted to a thorough analysis of data coverage and quality as well as to the consideration of problems relating to concepts and definitions used by the various national statistics departments and their impact on the comparability of data at the regional level.

The second part is an account of trends in general economic indicators on manufacturing activities during the period under review. That account is especially illustrated by statistical series on the number of establishments, employment, the contribution of the manufacturing sector to the domestic product, gross fixed capital formation and trade in manufactured goods.

The third part focuses on the analysis of production indices and productivity in about 15 African countries. There is also an in-depth analysis of the production of some typical commodities of the manufacturing industries in the region.

Finally, the fourth part of the study puts forward conclusions drawn from the statistical review and a series of recommendations on how to improve and develop data on manufacturing industries in the region.

1. METHODOLOGICAL PROBLEMS

1.1 Coverage and quality of data

The problem of data coverage is closely linked with the problem of defining the scope of surveys. In a considerable number of countries of the region, especially the French-speaking countries, available data concern institutional units classified according to their main activity i.e. production units that use modern management techniques such as keeping regular and modern accounts and have absolute autonomy when effecting major transactions. In other countries, such data concern functional units or legal entities carrying out a specific type of activity within the borders of a country.

In both cases it is often difficult, if not impossible, to have a clear idea of the statistical units selected in total production, value added, intermediate consumption or capital formation in the manufacturing sector for the simple reason that no nation-wide survey has been carried out in this sector. In order to find a partial solution to this problem, the domestic product estimates prepared by the ECA Statistics Division were sometimes used. It should be noted that the value added calculated from the survey data is generally censored. Such value added calculations differ from the contribution to domestic product in that non-industrial costs and incomes are taken into account.

9. Moreover, since most of the data on the characteristics of production units were not available, it was not possible to carry out an in-depth analysis of trends in the manufacturing industry in the region. In particular, the study makes no mention of changes that have affected the size of enterprises and establishments, the extent to which their technical operations are integrated and their plant capacity, their system of ownership, their legal organization and product distribution methods.

10. With respect to data quality, the situation prevailing in most countries is far from encouraging. Apart from mistakes in observation resulting from staff constraints, there were often major shortcomings which were probably due to the inadequacy of the questionnaires and counting techniques, accounting and administrative practices of the enterprises or the reluctance of some industrial units to co-operate with the national statistics departments out of the fear that their statements might be used for tax purposes by the authorities. These shortcomings have resulted among other things, in inconsistencies in the statistical series on general economic indicators with respect to manufacturing activities, the operating cost structure of enterprises, and changes in ratios between production and employment. They have been adjusted as far as possible to give sufficient consistency to the study.

1.2 Definitions and concepts used by countries and their impact on the comparability of data at the regional level

11. Although during the last ten years there has undoubtedly been great progress with **respect** to the implementation of international recommendations on the basic concepts and definitions of industrial statistics, there are still three stumbling blocks which, to some extent, hinder the comparability of data at the regional level. They concern the definitions of the scope of statistical surveys, the selection of statistical units and the measurement of employment.

12. As indicated above, the definition of the scope of current surveys is often based on the utilization of modern management techniques although the relevant international recommendations make provision for the use of a dimensional criteria based on the number of persons engaged. Even among those countries which comply with the above recommendations, not only do the dimensional thresholds selected vary quite considerably, but also the brackets of people engaged overlap only in a limited number of cases. It is therefore obvious that because of the above situation, comparison of data obtained from current surveys at the regional level can sometimes be rather approximate.

13. With respect to the selection of statistical units, the entities that are usually considered during surveys in the region are either enterprises or establishments of which one of the variants is functional units. Since key indicators such as the turnover, value added, employment and total investments can vary depending on the statistical unit selected, the data collected in the various countries do not necessarily have the same scope nor the same significance.

14. Finally, national statistical series on employment sometimes concern wage earners and sometimes the number of persons engaged. Such statistics can only be genuinely compared at the regional level if owners actually participating in production activities, their active partners and non-remunerated family workers form a very small group; such is definitely not the case with **respect** to handicrafts and cottage industries.

1.3 Problems relating to the measurement and comparison of productivity

15. It is well known that productivity is the ratio between production and all production inputs. Although measuring production is not too complicated, adding up production factors does pose very difficult theoretical and practical problems to which no satisfactory solutions have yet been found. Consequently, it was deemed preferable to restrict this aspect of the study to the measurement and analysis of labour productivity and to consider only the labour factor.

16. With a view to eliminating the structural differences between countries, the work initially focused on measuring and comparing net productivity using the following optimal formula:

$$\frac{EqAP^1A - \Sigma q^1AP^1A - \Sigma q^{11}AP^{11}A}{\Sigma qEP^1B - \Sigma q^1BP^1B - \Sigma q^{11}BP^{11}B} : \frac{N_A}{N_B}$$

qAP^1A qBP^1B designate the respective outputs of countries A and B

q^1AP^1A q^1BP^1B indicate intermediate consumption

$q^{11}AP^{11}A$ $q^{11}BP^{11}B$ indicate fixed capital consumption and,

N_A and N_B persons engaged

17. Subsequently, fixed capital consumption was not measured because most countries did not have data on that indicator. Value added was measured in local currency at 1970 constant factor cost and then converted into United States dollars using a conversion co-efficient based on official exchange rates ^{1/}. The aim of the above approach is to eliminate price structure differences from one country to another and also indirect inflation-related factors.

18. It should be noted that the series presented in the study concern the total value added of the modern manufacturing sector per man/year since constraints relating to the availability of data did not make it possible to expand, as planned, the calculations to include double figure indicators of the International Standard Industrial Classification of all Economic Activities (ISIC).

19. Moreover, the calculations are based on the assumption that the composition of manufacturing output is relatively uniform from one country to another. Although this assumption may hold true for some cottage industries and sub-regions, there is no doubt that the overall levels of productivity recorded in the Libyan Arab Jamahiriya, Egypt, Rwanda and the Central African Republic for example, are far from corresponding to the same products or ranges of products because of differences in stages of economic

^{1/} These are conversion co-efficients established by the International Monetary Fund. In the case of currencies with floating exchange rates, the co-efficients were weighted by import or export values.

and technological development, market requirements and social traditions.

20. Finally, in comparing data on productivity, one should bear in mind the above-mentioned problems concerning data coverage and quality, the selection of statistical units and concepts used. In particular, comparison may be biased because some countries include in the scope of their annual surveys a large number of small industrial establishments which have generally low productivity per unit of labour.

2. Trends in general economic indicators on manufacturing activities

21. During the period under review, the gross domestic product at constant 1970 factor cost grew at an average annual rate of more than 3 per cent in about 15 African countries. The highest growth rates were recorded in Gabon (10.4 per cent) Botswana (9.6 per cent) and Tunisia (7.7 per cent). The domestic product on the other hand fell considerably in Equatorial Guinea (an average of -10.4 per cent per year) and moderate or low annual drops were recorded in Angola (-3.8 per cent), Mozambique (3.6 per cent) and Sao Tome & Principe (-0.6 per cent). When compared to the total population, the domestic product was, in 1981, US\$2,048 in the Libyan Arab Jamahiriya, US\$1,220 in Gabon, US\$438 in Tunisia and US\$50 to 99 in nearly 20 countries.

22. The contribution of manufacturing industries to the domestic product increased steadily and in a remarkable way (31 to 8 per cent) in about 12 countries. In 1981 it was US\$2.1 billion in Egypt as against 1.2 billion dollars in Nigeria, 0.96 billion in Morocco and 0.82 in Algeria.

23. Manufacturing industries, which accounted for nearly a quarter of Zimbabwe's domestic product also accounted for a considerable portion of the domestic product (15 to 21 per cent) in Egypt, Mauritius, Morocco and Senegal. In six other African countries including the Ivory Coast, the Upper Volta, Madagascar, and Malawi the percentage of the domestic product attributable to manufacturing industries fluctuated between 11 and 19 per cent. In Algeria and Tunisia, manufacturing industries accounted for an average of about 10 per cent of the domestic product as against 2.8 per cent and 3.3 per cent (the lowest percentages recorded during the period) respectively in the Seychelles and the Libyan Arab Jamahiriya. In the latter two countries, the relatively low contribution of manufacturing industries to the domestic product seems to be the result of economic conditions which tended to have encouraged the development of services (50 to 70 per cent of GDP), the building and public works sectors, and extractive industries ^{1/}.

24. There was a sharp increase in the value added at current prices of the modern manufacturing sector in almost all the countries. From 1970 to 1980, it increased by 15 in Rwanda and 13 in the Libyan Arab Jamahiriya. In the Ivory Coast and Kenya, the level reached in 1980 was more than five and a half times the 1970 level. However, with the exception of two or three countries, these spectacular increases correspond to a rather moderate expansion of the manufacturing sector in that the countries of the region experienced particularly high rates of inflation during the period under review (see Table 2.9).

^{1/} Especially the production of crude oil and natural gas which seems to be a priority sector in the Libyan Arab Jamahiriya.

25. With respect to the number of establishments, an annual average growth rate of 9.4 to 10 per cent was recorded in the Ivory Coast, Nigeria and Somalia, and a rate of 5.1 to 7.1 per cent in Ghana, the Libyan Arab Jamahiriya, Mauritius, the Seychelles, Swaziland and Tunisia. On the other hand, the number of establishments decreased at an average annual rate of more than 5 per cent in the Central African Republic and nearly 2 per cent in Malawi. The highest number of establishments was recorded in Egypt: an average of 4,9000 units.

26. Egypt also had the largest number of people engaged in the modern manufacturing sector: between 607,900 and 882,500. Egypt is followed, in descending order by Nigeria (an average of 216,000 persons), Zimbabwe (138,000), Kenya (102,500), and Tunisia (83,000). In most of the countries, the average annual growth rate of persons engaged in industry was higher than 5 per cent. It was negative or nil in two countries: the Central African Republic and the Gambia.

27. Finally, from 1976 to 1980, manufactured products represented more than half the value of national imports in all the countries. On the other hand, their share in exports was generally very diverse and rather low: less than 1 per cent in Algeria, the Libyan Arab Jamahiriya, Liberia, Mauritania and Nigeria; it represented 26 per cent of total exports in Egypt, 51 per cent in Sierra Leone, 73 per cent in Zaïre and 97 per cent in Zambia.

Tableau 2.1/ Table 2.1

Produit Intérieur Brut, total (PIB) and coût des facteurs constants, 1970/
Total Gross Domestic Product (GDP) at constant factor cost, 1970.

Pays/Countries	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	Taux de croiss. ann. / Annual av. growth rate
Algérie/Algeria	3622.2	3577.4	3999.5	4455.0	4960.2	5425.3	5755.6	6093.9	6500.5	6835.6	7137.6	7331.2	7.3
Angola	1537.3	1568.8	1642.5	1765.4	1644.2	998.7	798.8	836.2	848.1	856.2	896.2	885.2	-3.8
Bénin	223.9	225.0	248.3	263.7	257.8	261.6	270.9	242.4	252.3	267.1	272.7	282.9	2.3
Botswana	92.8	116.1	125.3	135.6	138.0	136.1	158.9	161.9	182.7	203.0	232.0	247.2	9.5
Burundi	227.2	233.4	218.4	226.7	242.5	239.5	254.4	279.2	288.9	293.3	292.8	314.2	2.8
Cabo Verde/Cape Verde	25.3	23.9	22.8	22.6	22.4	23.0	23.7	23.6	24.2	25.4	26.7	28.6	1.2
Caméroun/Cameroon	26.7	28.9	30.0	30.1	33.6	29.0	23.7	24.4	25.6	27.2	29.8	31.1	1.9
Côte d'Ivoire/Ivory Coast	236.6	249.3	250.7	278.8	287.6	290.5	284.2	271.3	261.5	271.4	282.6	291.4	2.0
Égypte/Egypt	1192.0	1277.7	1352.5	1443.7	1458.3	1594.9	1714.4	1783.0	1983.7	2259.5	2108.0	2137.5	5.5
Éthiopie/Ethiopia	65.4	73.3	77.6	82.3	83.5	87.4	91.4	79.5	72.4	74.2	77.9	82.9	2.2
Gabon	6041.9	6271.9	6563.9	6858.3	6959.5	7502.3	8036.6	8693.7	9459.5	10737.1	11132.2	11862.9	6.4
Gambie/Gambia	1760.0	1843.6	1893.2	1920.8	1922.4	1967.2	1978.8	1956.4	2058.0	2174.4	2308.0	2413.6	3.0
Ghana	279.8	270.4	273.1	384.7	544.2	637.3	922.9	764.6	643.4	626.0	651.7	675.7	10.4
Guinée/Guinea	54.7	59.6	53.1	66.9	72.5	68.4	73.2	66.5	83.4	62.3	66.8	64.0	2.3
Guinée-Bissau/Guinea-Bissau	2031.5	2223.6	2240.3	2364.8	2488.2	2210.9	2103.1	2192.3	2345.1	2161.9	2053.1	2100.0	0.3
Guinée Equatoriale/ Equatorial Guinea	611.8	646.8	644.3	654.6	693.5	705.1	733.1	702.2	724.7	721.2	767.5	796.8	2.6
Haute-Volta/Upper Volta	59.1	56.5	60.3	60.7	63.9	66.1	66.7	62.4	65.2	66.4	63.4	65.2	1.0
Jamahiriya Arabe Libyenne/ Socialiste et Populaire/ Socialist People's Libyan	74.0	67.1	62.9	51.3	62.5	44.0	29.1	26.6	24.4	22.1	19.9	20.3	-10.4
Arab Jamahiriya	289.9	293.0	296.2	278.6	302.2	304.9	304.7	295.2	304.5	319.4	326.0	345.2	1.7
Kenya	3665.8	3749.7	3830.9	4217.3	4645.8	4990.2	5121.5	5664.8	6844.0	7378.9	7429.3	6230.8	5.5
Lesotho	1435.2	1514.9	1619.5	1722.3	1737.0	1808.4	1851.0	2011.0	2150.0	2241.6	2308.0	2419.5	4.9
Liberia/Liberia	59.4	63.8	67.2	84.7	89.8	82.4	96.0	113.0	130.3	121.7	121.1	125.3	7.5
Madagascar	380.0	405.4	422.3	441.0	464.5	447.3	461.3	465.8	475.1	491.0	483.0	488.1	2.3
Malawi	782.7	794.1	784.4	791.3	814.6	825.3	810.0	837.8	866.4	899.0	891.7	861.0	0.9
Mali	299.2	351.4	380.3	418.7	442.8	466.7	502.7	536.2	565.3	589.8	593.4	613.9	6.8
Mali	306.3	321.0	333.6	320.3	331.5	350.2	376.9	399.6	420.2	432.7	448.7	459.2	4.0
Mali/Morocco	3355.0	3555.2	3618.6	3735.2	3952.4	4321.7	4800.9	5069.3	5552.2	5663.5	5883.6	5755.2	5.1

Table 2.1/Annexe 2.1

Produit Intérieur Brut, total (PIB) au coût des facteurs constants, 1970 (Suite)
 Brutto Domestic Product (GDP) at constant factor cost, 1970 (Continued)

		En millions de Dollars EU/In million US Dollars										1980	
		1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
Pays/Countries													
Mali/Maldives		164.2	174.1	195.2	225.1	252.6	284.5	274.7	298.3	309.2	325.2	285.2	310.1
Mauritanie/Mauritania		194.5	191.6	196.5	179.	191.6	212.0	219.0	200.6	193.6	200.0	212.2	230.1
Mauritanie/Mauritania		1764.0	1863.9	1943.1	2055.6	232.6	1992.7	1916.3	1928.5	1940.8	1939.5	1989.9	1643.4
Mauritanie/Mauritania		381.7	383.2	392.2	331.4	371.3	363.1	422.9	432.3	459.6	512.4	535.5	542.3
Nigeria/Nigeria		1005.8	11477.0	11796.2	12639.0	14732.3	14075.3	15476.1	15687.9	15727.3	16460.2	16749.3	16119.1
Nigeria/Nigeria		1195.2	1236.6	1236.6	1236.6	1236.6	1236.6	1236.6	1236.6	1236.6	1236.6	1236.6	1236.6
République centrafricaine/Central African Republic		161.2	150.1	177.4	194.2	152.5	166.7	190.6	204.6	205.7	205.0	201.8	190.5
République Unie du Cameroun/United Rep. of Cameroon		1028.2	1095.8	1169.1	1265.2	129.6	1996.5	1381.6	1453.8	1491.1	1633.9	1694.5	1732.3
République Unie de Tanzanie/United Rep. of Tanzania		1150.1	2196.4	1276.6	1319.8	1352.8	1435.8	154.5	1634.6	1638.5	1693.4	1733.9	1675.7
République Unie de Tanzanie/United Rep. of Tanzania		204.7	219.7	221.9	225.3	265.7	315.6	339.2	250.7	273.8	357.5	389.3	409.1
République Unie de Tanzanie/United Rep. of Tanzania		12.9	13.4	14.1	15.3	11.5	19.0	70.2	11.0	11.1	11.4	11.6	12.0
République Unie de Tanzanie/United Rep. of Tanzania		765.3	738.3	610.3	706.3	799.9	861.3	918.7	918.9	857.7	940.0	879.7	88.0
Sénégal/Senegal		17.3	17.9	20.7	22.7	21.0	21.0	23.3	24.6	25.9	27.1	29.2	31.1
Seychelles		375.8	375.6	393.3	403.7	413.3	406.6	417.3	418.1	435.9	451.1	407.7	405.6
Sierra Leone		215.6	229.9	245.4	252.7	256.4	263.4	276.9	284.9	292.6	294.9	302.3	303.3
Somalie/Somalia		1889.7	2021.6	1996.0	1964.3	2093.6	2176.9	2274.6	2330.6	2475.6	2547.4	2633.5	2731.3
Soudan/Sudan		103.2	105.4	118.0	126.8	136.1	145.5	155.0	165.2	175.6	188.3	201.3	214.3
Soudan/Sudan		297.8	300.4	293.3	269.5	305.5	336.5	251.2	358.9	345.6	339.9	336.1	295.0
Tchad/Chad		239.9	250.4	260.5	249.2	261.8	264.9	254.6	259.0	292.0	305.3	310.1	326.5
Togo		1250.1	1393.3	1654.5	1649.0	1821.5	1999.8	2105.9	2179.2	2364.0	2488.2	2664.5	2795.2
Tunisie/Tunisia		1470.0	1575.6	1561.5	1699.5	1780.0	1753.8	1700.4	1693.8	1730.6	1719.3	1782.8	1813.0
Zaire/Zaire		1501.9	1714.8	1873.0	1863.2	1995.4	1910.8	1985.2	1901.0	1906.5	1773.6	1631.3	1801.2
Zambie/Zambia		1357.0	1528.6	1731.9	1689.0	1814.9	1817.7	1792.8	1656.6	1632.3	1657.2	1844.0	2068.1
Zimbabwe													4.1

Source: Listings de Comptabilité Nationales de la CEA (Tableau 3d, 30/12/82)
 ECA National Accounts Computer Printouts (Table 3d, 30/12/82)

Tableau 2.2/Table 2.2

Evolution de la contribution des industries manufacturières au Produit Intérieur Brut (PIB)
 au coût des facteurs constants de 1970 (en valeur)
 trends in the contribution of manufacturing to the Gross Domestic Product (GDP)
 at constant factor cost of 1970 (value)

Pays/Countries	En millions de Dollars BR In million US Dollars										
	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
Algerie/Algeria	404.3	371.8	383.6	503.1	597.9	533.3	59.3	20.5	466.0	741.3	193.2
Angola	79.6	87.7	106.0	136.6	120.3	49.4	37.8	35.7	40.2	41.5	44.0
Berlin	18.7	19.8	20.5	20.4	26.2	3.9	17.8	15.5	17.7	17.2	16.3
Botswana	7.3	8.1	9.5	9.9	10.9	14.7	19.2	21.0	19.0	20.1	18.1
Burundi	15.4	16.0	16.6	17.1	19.3	18.9	21.1	21.6	22.3	23.8	23.7
Cape Verde	1.3	1.3	1.3	1.3	1.4	1.4	1.5	1.4	1.4	1.5	1.7
Comores/Comoros	1.8	1.9	2.1	2.0	2.1	2.1	1.3	1.3	1.3	1.3	1.5
Congo	74.6	25.8	24.4	24.2	24.4	22.0	22.3	23.8	25.3	24.9	26.2
Côte d'Ivoire/Ivory Coast	135.9	147.8	184.3	172.0	189.5	166.9	212.8	231.1	261.3	276.7	281.2
Djibouti	4.0	2.8	5.2	5.0	6.0	6.7	5.1	6.0	5.8	6.5	6.9
Egypte/Egypt	1184.5	1362.7	1306.4	1327.1	1326.0	1442.3	1535.6	1593.8	1667.4	1788.3	1775.6
Ethiopie/Ethiopia	162.0	172.6	183.5	181.8	179.2	176.8	182.0	178.0	202.8	218.0	224.6
Gabon	11.5	12.5	21.6	28.6	35.1	39.9	48.7	64.5	57.6	60.2	66.2
Gambie/Gambia	2.8	2.5	1.9	4.5	3.0	4.0	4.5	3.9	3.1	1.9	1.2
Ghana	252.8	237.2	215.6	231.7	255.8	279.3	292.8	274.4	291.1	255.6	256.2
Guinée/Guinea	17.7	18.4	21.1	21.4	20.9	19.9	20.3	20.3	22.9	22.5	23.1
Guinée-Bissau/Guinea-Bissau	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.8	0.8
Guinée Equatoriale/Equatorial Guinea	2.8	2.7	2.6	2.7	2.7	2.5	1.7	1.6	1.1	0.9	0.9
Haute-Volta/Upper Volta	31.5	30.6	41.2	40.5	42.3	41.5	23.4	40.0	41.9	46.4	47.5
Jamahiriya Arabe Libyenne Socialiste et Populaire/ Socialist People's Libyan Arab Jamahiriya	64.4	67.2	95.2	117.0	142.8	150.8	224.0	310.8	350.0	338.8	356.4
Kenya	174.0	196.6	211.0	241.5	255.8	257.4	254.6	295.0	332.2	355.8	345.9
Lesotho	1.6	1.0	3.3	4.8	5.0	4.6	5.4	5.0	5.2	6.0	6.1
Libérie/Liberia	15.2	17.3	17.8	22.1	28.1	26.1	26.0	26.0	27.6	28.2	26.8
Madagascar	90.1	86.2	87.7	95.3	102.6	100.5	99.6	101.7	104.7	109.0	105.7
Malawi	26.0	46.3	53.0	64.4	67.7	77.3	75.5	83.6	88.6	93.2	96.8

Tableau 2.2/Table 2.2.

(PIB)

Evolution de la contribution des industries manufacturières au Produit Intérieur Brut

(Suite)

de 1970 (en valeur) de 1970 (en valeur) de 1970 (en valeur)

trends in the contribution of manufacturing to the Gross Domestic Product (GDP)

En millions de Dollars EU/
In million US Dollars

at constant factor cost of 1970 (value) (Continued)

Pays/Countries	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	Taux de cr. ann./An. growth rate
Mali	28.4	29.2	30.8	33.6	33.9	34.4	34.8	37.7	38.8	41.1	41.8	43.9	4.1
Maroc/Morocco	532.0	566.4	598.8	653.5	685.5	730.2	738.3	790.8	897.9	912.4	955.2	955.2	5.5
Maurice/Mauritius	26.3	29.2	36.0	38.9	42.3	44.8	54.4	59.8	61.0	63.7	58.0	64.4	8.8
Mauritanie/Mauritania	9.5	9.5	9.6	8.4	8.6	9.5	10.1	11.4	11.8	12.6	13.3	13.4	3.4
Mozambique	103.8	149.6	160.4	171.3	167.9	125.9	81.7	84.2	94.3	94.3	97.3	100.1	1.6
Niger	23.1	22.3	25.4	29.6	23.1	24.8	24.9	25.1	27.4	29.6	30.7	31.4	3.3
Nigeria/Nigeria	448.0	478.8	576.8	569.8	551.6	681.8	840.0	827.4	910.0	1008.0	1114.4	1177.4	9.6
Ouganda/Uganda	89.0	93.0	93.9	87.4	88.3	76.9	75.7	69.2	61.9	59.1	58.1	58.7	-3.6
République centrafricaine/ Central African Republic	23.7	23.8	23.3	24.5	24.6	23.3	23.9	27.6	28.7	28.9	28.1	25.6	0.9
République Unie du Cameroun/ United Republic of Cameroon	103.0	109.9	100.1	104.4	107.2	113.6	115.8	125.6	135.3	149.3	153.6	164.6	4.5
République Unie de Tanzanie/ United Republic of Tanzania	115.9	127.0	137.8	143.9	145.7	146.2	155.5	164.6	176.3	176.8	146.2	104.9	-0.2
Rwanda	7.1	7.5	7.9	8.1	34.0	36.0	38.7	40.8	44.5	47.8	48.8	49.7	33.9
Sao Tomé-et-Principe/ Sao Tome and Principe	0.6	0.6	0.7	0.8	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.7	1.9
Senegal/Senegal	122.1	126.0	128.0	125.2	137.3	150.4	160.2	168.2	157.6	165.2	147.0	143.6	1.7
Seychelles	0.3	0.2	0.4	0.5	0.6	0.7	0.9	0.8	0.9	1.0	1.2	1.4	18.7
Serra Leone	24.5	26.0	27.6	36.2	35.8	33.6	32.8	34.2	35.2	33.0	30.8	29.8	2.3
Somalie/Somalia	14.0	16.9	18.9	20.7	20.7	22.0	22.5	23.4	23.4	23.8	24.9	25.3	5.7
Soudan/Sudan	192.4	218.3	158.0	270.0	175.2	172.3	163.7	158.0	155.1	178.1	186.7	198.2	3.2
Swaziland	12.7	16.0	20.9	22.1	25.2	27.6	29.4	30.8	33.9	36.0	36.8	40.3	11.4
Tchad/Chad	16.4	19.5	18.4	18.7	20.3	21.8	21.5	21.8	20.3	18.7	16.5	13.0	-1.5
Togo	24.6	23.5	21.9	24.0	18.5	19.7	19.8	19.9	17.7	18.8	19.2	23.7	0.3
Tunisie/Tunisia	115.2	136.8	179.6	178.5	201.5	212.0	234.1	244.0	283.2	289.0	302.3	319.2	10.0
Zaire/Zaire	111.0	122.2	122.8	133.8	154.6	134.2	123.6	121.0	115.6	109.0	107.8	106.6	0.0
Zambie/Zambia	98.0	189.6	212.7	218.4	239.7	196.3	168.0	158.9	150.8	173.2	181.2	178.9	8.5
Zimbabwe	289.1	298.8	399.8	363.8	384.6	388.7	368.0	347.2	348.6	383.2	430.2	473.1	5.1

Source: Listings de Comptabilité Nationale de la CEA (Tableau 3d, 30/12/82)

ECA National Accounts Computer Printouts (Table 3d, 30/12/82)

Tableau 2.3/Table 2.3

Nombre d'établissements dans le secteur des industries manufacturières
(secteur moderne)/Number of manufacturing establishments (modern sector)

Pays/Countries	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	Nombre/Number	Taux de cr. moy. ann./Annual av. growth rate
Côte d'Ivoire/Ivory Coast	...	...	...	...	410	438	457	498	538	604	701		9.4
Egypte/Egypt	5138	4909	4812	5298	4733	4788	4888	4859*	4830*	4801*	4772*		-0.6
Ethiopie/Ethiopia	479	401	420	421	436	435	430	420	416	417	412		-1.11
Gambie/Gambia	...	...	...	...	...	27*	28	27	29	30*	31*		1.9
Ghana	347	364	362	370*	378*	386*	458	482	507*	533*	561*		5.1
Jamahiriya Arabe Libyenne Socialiste et Populaire/ Socialiste People's Libyan Arab Jamahiriya	202	206	219	230	249	272	271	285*	300*	315*	331*		5.1
Kenya	307	344	407	354	423	411	415	456	432	451	450		4.4
Madagascar	352	362	363	360	364	365	420	433*	446*	460*	474*		3.1
Malawi	127	136	139	130	115	115	103	108	109	105	103*		-1.9
Maurice/Mauritius	3555	3616	3747	...	382	390	432	456	474	509	528		5.6
Nigeria/Nigeria	704	870	1057	1008	1057	1246	1269	1407*	1560*	1730*	1919*		10.9
République centrafricaine/ Central African Republic	...	51	...	39	37	36	33	31*	29*	27*	26*		-5.4
Rwanda	58	56	54	74	71	46	50	41	48	47	47		-0.4
Seychelles	...	...	...	...	...	28*	30	34	33	35	37		5.5
Somalie/Somalia	183	187	212	259	375	287	255	257	283*	311*	342*		10.0
Suède/Sweden	29	33	37	39	43*	47*	47	44	47	57	61*		7.1
Tunisie/Tunisia	793	791	850	965	1151	1308	1360	1215	1295*	1380*	1471*		6.6
Zimbabwe	1161	1246	1286	1302	1323	1367*	1412	1459*	1507*	1557*	1608*		3.3

17 Établissements privés ayant 10 employés ou plus (1974-80) / Privately owned establishments with 10 or more employees (1974-80)
Source: Annuaire des statistiques industrielles de l'ONU (Tome I) et estimations de la Division de la Statistique de la C
United Nations Yearbook of Industrial Statistics (Volume I) and estimates by ECA Statistics Division.

Tableau 2.4/Tablle 2.4

Nombre moyen de personnes occupées dans les industries manufacturières
(secteur moderne)/Average number of persons engaged in manufacturing(modern sector)

(secteur moderne)/(Average number of persons engaged in manufacturing)													
Pays/Countries	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	Milliers/Thousands	Taux de croissance moyen annuel/ Average annual growth rate
Côte d'Ivoire/	33.1	35.5	*	41.0	43.2	49.4	54.3	58.7	60.3	63.5	67.2	7.4	
Ivory Coast/	607.9	634.2	651.3	694.5	711.9	737.5	760.2	789.1	819.1	850.2	882.5	3.8	
Egypte/Egypt	49.4	51.5	53.5	55.0	57.5	60.1	59.4	62.8	66.1	76.8	80.8	5.1	
Ethiopie/Ethiopia	...	...	...	...	...	2.7	2.7	3.5	3.5	1.7	1.8	0.0	
Gambie/Gambia	57.7	58.9	60.7	62.4	64.0	65.8	89.0	89.9	90.8	91.7	92.7	5.3	
Ghana													
Jamahiriya Arabe Libyenne													
Socialiste et Populaire/													
Socialist People's Libyan	7.3	8.1	8.8	9.0	10.7	12.6	14.1	15.7	17.6	19.6	21.9	11.7	
Arab Jamahiriya	65.4	75.1	94.0	95.5	96.0	97.8	110.4	123.0	122.1	120.8	129.3	7.3	
Kenya	36.2	37.0	37.3	41.5	46.2	42.3	41.8	42.9	44.1	45.3	46.5	2.7	
Madagascar	17.6	19.8	23.8	25.7	25.9	28.0	27.0	30.7	32.2	29.2	31.0	6.1	
Malawi/	21.8	23.0	25.9	28.3	30.9	33.7	36.8	42.9	44.1	45.4	46.7	7.1	
Maurice/Mauritius	129.3	148.6	172.0	169.9	186.0	204.2	224.3	246.2	270.4	296.9	325.9	9.8	
Nigéria/Nigeria													
République centrafricaine/	9.2	9.0	8.8	7.5	5.7	6.7	4.6	5.9	5.8	5.6	5.5	-2.6	
Central African Republic/	6.2	6.2	6.3	6.3	5.4	2.8	3.9	3.7	5.4	4.6	4.6	0.5	
Rwanda/	...	...	...	...	...	0.7	0.7	0.8	0.8	0.9	0.9	6.7	
Seychelles	...	...	...	...	...	10.5	10.5	11.0	12.2	13.6	15.2	11.3	
Somalie/Somalia	5.6	6.2	5.3	6.7	9.5	7.4	7.8	8.2	8.2	12.7	15.1	11.7	
Swaziland	5.4	5.9	6.0	6.5	6.9	7.8	8.0	101.7	111.0	121.3	132.4	9.2	
Tunisie/Tunisia	55.6	53.7	58.4	65.9	70.1	77.8	87.0	101.7	111.0	121.3	132.4	9.2	
Zimbabwe/	11.8	122.3	132.5	137.7	147.9	151.7	146.9	141.2	138.7	142.2	145.7	2.5	

Source: Annuaire des Statistiques Industrielles de l'ONU (Tome I)/
United Nations Yearbook of Industrial Statistics (Volume I)

1/ Nombre moyen de salariés/average number of employees

Tableau 2.5/Tablle 2.5

Valeur ajoutée des Industries Manufacturières (secteur moderne)/
Value added in manufacturing (modern sector)

Pays/Countries	En milliards de Dollars EU/In thousands US Dollars										Taux de cr. moyen an./an. av. growth rate	
	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	
Côte d'Ivoire/Ivory Coast	190912*	226804*	269443*	320098*	380276	428728	469020	606640*	749529*	890440*	1057843*	12.8
Egypte/Egypt	695196	792735	894894	1122342	1508153	1428339	1767187	2072910	2431523*	2852170*	3315602*	17.3
Ethiopie/Ethiopia	104112	114844	135159	163733	183952	208358*	219487	230827	252239	353200*	405627*	14.9
Gambie/Gambia	...	...	...	...	...	3254*	3572	4598	3871*	4123*	4391*	6.5
Ghana	217630	246295	221248	226285	230811*	233427	438095	440120	442321	444533	446156	9.8
Jamahiriya Arabe Libyenne/ Socialiste et Populaire/ Socialist People's Libyan	43489	50931	59969	72274	122121	166532	197601	256684*	333433*	433109*	562835*	29.9
Arab Jamahiriya	134695	161550	210163	273945	299074	327551	386730	474723	551487	711398	782680	19.4
Kenya	66882	68950	77751	106031	122178	135372	120874	134523	159135*	166655*	185257*	11.3
Madagascar	23997	27638	31122	31077	30741	42821	48174*	54196*	60971*	68592*	77146*	12.5
Malawi	25056	28350	38590	43879*	84380	99801	96368	105844	126706	154549	177543	21.6
Maurice/Mauritius	551954	621433	753213	882252	1063783	1006005	1200637	1383134	1593370	1835582	2114567	15.2
Nigeria/Nigeria	14623*	14872	15125*	20362	25215	23039*	20725*	21077*	21435*	21799*	22170*	5.0
République Centrafricaine/ Central African Republic	8510	5790	4245	6185	20790	32391	50465	71788	102519	104263	127514	44.4
Rwanda	...	...	...	...	...	...	...	...	...	...	...	...
Seychelles	14015	15884	16842	17690	16193*	18786*	28205	38607	45170	52849	61833*	17.0
Swaziland	13513	13253	18138	31055	42048	56932	65651	57849	52619	81502*	90712*	23.8
Tunisie/Tunisia	126533	136593	182689	218062	286683	335765	365539	521981	623141	763975*	936633*	22.6
Zimbabwe	358833	410324	505334	689228	847071	922166	877796	854624	881423	993364	1119521	17.7

Source: Annuaire des Statistiques Industrielles de l'ONU (Volume I). (Year I)/United Nations Yearbook of Industrial Statistics (Volume I).

Tableau 2.6/Tablo 2.6

Valeur ajoutée estimée les industries manufacturières
aux coûts des facteurs constants de 1970 (secteur moderne)//
Estimated value added in manufacturing
at constant factor cost of 1970 (modern sector)

Pays/Countries	En milliards de Dollars EU/In thousand US Dollars										Taux de cr. moyen annuel/ Average cr. growth rate	
	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	
Côte d'Ivoire/Ivory Cos.	152359	179346	187490	198235	184550	203034	207480	223354	254165	298514	306768	7.5
Egypte/Egypte	680848	726159	871439	1107728	1413122	1475000	1738577	1968805	2228771	2593839	2521303	14.3
Ethiopie/Ethiopia	97466	106193	114544	113025	111033	120440	121354	122209	124136	174413	201434	8.1
Ghana	204547	204442	198428	206669	201984	157525	236028	282016	302273	259227	207926	
Jamaïque/Jamaica												
Libye/Libya												
Maroc/Morocco												
Niger/Niger												
Nigeria/Nigeria												
Sierra Leone/Sierra Leone												
Soudan/Sudan												
Togo/Togo												
Tunisie/Tunisia												
Zaïre/Zaire												
Algérie/Algeria	42143	47296	49456	48249	73723	96075	117594	148962	181198	192570	207065	18.2
Arabie Saoudite/Saudi Arabia	133089	155532	189410	198640	221664	236578	273461	308607	305128	345850	339542	10.1
Kenya	58187	55289	60509	70635	78039	84262	60769	63711	69243	68774	67174	2.2
Mali/Mali	22369	24865	32038	31854	35313	36502	34129	32998	30705	32678	31459	3.9
Maurice/Mauritius	21800	23989	29604	30507	35875	35891	40075	43801	50936	48169	52538	9.5
Nigeria/Nigeria	527156	571367	660308	674163	607662	599735	691193	737615	815526	698419	991062	6.8
République centrafricaine/Central African Republic	12908	12483	12294	16148	13880	14941	12135	11924	11519	10612	9576	-2.2
Sénégal/Senegal	13524	14551	14231	16676	19105	20444	16695	18722	20276	20862	23089	6.0
Soudan/Sudan	12296	11446	14256	13052	16250	19277	24079	21131	20598	30239	33447	12.0
Tunisie/Tunisia	109580	116529	139284	143398	152397	170071	191436	235944	269064	289422	329676	11.8
Zaïre/Zaire	335905	338282	463220	494068	538060	551885	507686	482198	459374	451201	459684	3.8

Source: Division de la Statistique de la CEA/
ECA Statistics Division

Tableau 2.7 / Table 2.7

Part des produits manufacturés dans les importations totales/
Share of manufactured goods in total imports

Pays/Countries	En valeur/Value En millions de Dollars EU/ In million US Dollars					En pourcentage/Percent				Taux de cr. moyen an./An. av. growth rate
	1976	1977	1978	1979	1980	1976	1977	1978	1979	
Algérie/Algeria	4145	5555	7126	6890	7663	78.2	78.1	79.5	76.7	72.9
Burundi	38	61	65	120	181	55.9	64.8	67.1	67.1	64.8
Congo	123	139	165	220	268	73.7	76.0	74.2	65.3	74.2
Côte d'Ivoire/Ivory Coast	927	1272	1735	1699	2103	69.0	72.6	75.1	71.2	69.0
Egypte/Egypt	2323	3144	4470	2569	2895	58.8	66.4	67.0	67.0	58.8
Ethiopie/Ethiopia	265	279	399	396	462	74.9	72.7	66.8	66.8	72.7
Gabon	428	569	590	684	807	86.2	84.1	84.1	77.8	84.1
Ghana	562	601	990	315	313	65.2	59.6	59.6	63.4	63.4
Jamhiriya Arabe Libyenne Socialiste et Populaire/ Socialist People's Libyan Arab Jamhiriya	2534	2946	3711	4289	5301	80.4	78.7	80.6	80.7	76.2
Kenya	618	834	1244	1121	1471	69.8	60.7	72.9	69.8	69.8
Libéria	280	318	307	323	273	58.2	58.2	47.9	47.9	58.2
Madagascar	187	241	294	405	496	67.0	67.0	66.7	71.2	73.6
Malawi	152	178	274	306	329	74.7	76.7	72.4	72.4	74.7
Mali/Morocco	1617	2059	1729	1932	2062	55.2	64.9	52.1	52.1	55.2
Mauritanie/Mauritania	124	143	125	179	206	58.0	58.0	58.0	58.0	58.0
Niger/Nigeria	6929	9254	10504	10573	12254	83.0	84.0	82.3	78.3	83.0
République Unie du Cameroun/Un. Rep. of Cameroon	454	555	800	972	1186	79.0	77.1	77.4	77.4	77.6
République Unie du Tansanie/Un. Rep. of Tanzania	436	537	906	668	777	68.3	67.9	67.9	67.9	64.2
Sénégal/Senegal	366	467	442	534	504	54.3	54.3	54.3	54.3	54.3
Sierra Leone	102	117	139	185	226	60.4	60.4	60.4	60.4	60.6
Soudan/Sudan	741	743	665	718	901	70.6	70.6	75.7	78.4	70.6
Togo	147	206	241	366	499	70.4	70.4	70.7	70.4	70.4
Tunisie/Tunisia	1038	1257	1501	1755	2047	68.0	69.0	69.6	62.1	64.5
Zaire/Zaire	441	593	542	397	395	70.8	70.8	70.8	70.8	70.8
Zambie/Zambia	490	508	455	583	624	77.1	77.1	77.1	77.1	77.1

Sources: 1. Annuaire Statistique du Commerce International de l'ONU (Tome I) //
United Nations Yearbook of International Trade Statistics (Volume I)

2. Publications Nationales/National Publications

3. Estimations de la CEA/ECA estimates

Tableau 2.8 / Table 2.8

Part des produits manufacturés dans les exportations totales/
Share of manufactured goods in total exports

Pays/Countries	En valeur/Value					Taux de cr. moyen an./An. av. growth rate					
	En millions de Dollars EU/ In million US Dollars										
	1976	1977	1978	1979	1980						
Algérie/Algeria	48	49	46	46	66	1.0	0.8	0.8	0.5	0.4	9.9
Burundi	1	1	1	-	1	0.9	1.1	2.1	-	2.1	0.0
Congo	23	29	32	32	36	12.9	15.9	15.4	7.6	14.7	12.2
Côte d'Ivoire/Ivory Coast	117	155	144	201	245	8.1	7.2	6.2	8.0	8.1	21.7
Egypte/Egypt	403	460	513	417	357	25.4	26.9	29.5	22.7	25.4	-1.9
Ethiopie/Ethiopia	1	2	2	1	1	1.8	1.8	2.4	3.3	2.4	12.5
Gabon	11	12	12	15	17	1.0	1.0	2.1	2.4	2.1	11.9
Ghana	104	109	35	33	25	13.8	15.7	10.5	10.5	10.5	-23.9
Jamhiriya Arabe Libyenne Socialiste et Populaire/ Socialist People's Libyan Arab Jamhiriya	-	7	28	69	-	0.0	0.1	0.3	0.4	0.0	...
Kenya	92	115	125	143	160	12.5	10.0	12.5	13.7	12.5	19.0
Libérie	4	4	6	5	11	1.1	0.4	1.1	1.1	1.1	36.3
Madagascar	21	23	27	29	24	7.3	8.0	6.8	7.6	6.3	4.3
Malawi	6	6	7	7	17	5.5	3.1	5.5	5.6	5.5	39.9
Maroc/Morocco	212	292	297	305	613	19.8	22.5	19.8	27.0	19.8	32.7
Mauritanie/Mauritania	7	9	9	9	10	1.3	1.3	1.3	1.1	1.3	9.9
Nigéria/Nigeria	44	36	45	97	135	0.6	0.3	0.5	0.4	0.6	39.9
République Unie du Cameroun/Un. Rep. of Cameroon	79	58	95	122	73	15.4	8.7	13.7	10.8	13.7	6.4
République Unie du Tanzanie/Un. Rep. of Tanzania	41	43	60	46	76	8.5	8.3	8.2	10.9	14.4	21.6
Sénégal/Senegal	75	71	60	40	59	15.3	1.7	15.3	15.3	14.1	-1.7
Sierra Leone	65	100	80	118	150	54.6	44.4	44.1	54.0	55.1	27.1
Soudan/Sudan	7	6	5	2	5	0.4	0.8	0.6	0.3	0.1	14.8
Togo	7	10	9	49	54	7.1	5.7	5.5	7.1	7.1	121.9
Tunisie/Tunisia	213	322	436	618	815	27.0	34.6	38.7	34.5	29.6	40.1
Zaire/Zaire	676	657	509	962	1166	74.3	74.3	71.0	74.3	74.3	21.2
Zambie/Zambia	1011	869	824	1362	1572	97.2	96.8	96.9	97.2	97.2	15.4

Sources: 1. Annuaire Statistique du Commerce International de l'ONU (Tome I)/
United Nations Yearbook of International Trade Statistics (Volume I)

2. Publications Nationales/National Publications

3. Estimations de la CEA/ECA estimates

3. PRODUCTION AND PRODUCTIVITY OF MANUFACTURING INDUSTRIES

28. The data available ^{1/} indicate that, from 1970 to 1980, the volume of production of manufactured goods more than quadrupled in Nigeria and at least doubled in Kenya and Malawi. They also show quite a steep increase in the production of manufactured goods in Tunisia where the corresponding index (base 100 in 1970) was 189 in 1980. In Zaire, on the other hand, the production of manufactured goods remained below the 1970 level during the last three years of the period under review after experiencing a moderate growth rate between 1970 and 1974. Ghana recorded a drop of about 30 per cent in its production of manufactured goods from 1977 to 1980.

29. With respect to some key products of manufacturing in the region such as meat, raw sugar, beverages and cement, the volume of production increased quite steadily and substantially in most of the countries for which the relevant data were available such as Botswana, the United Republic of Cameroon, the Ivory Coast, the United Republic of Tanzania and so on. The production of raw sugar, beverages and cement went through a remarkable period of growth recording average annual rates that were sometimes higher than 40 per cent in Botswana, Cape Verde, the Ivory Coast, Kenya, Nigeria and Tunisia. There were, however, slight drops in the production of staple foods (between 0.7 per cent and 1.8 per cent on the average per year) in Ethiopia, Egypt, the Niger, Zambia and Zimbabwe; there was a considerable drop in staple food production averaging more than 10 per cent per year particularly in Algeria, Mozambique, Ghana and the Upper Volta.

30. Finally, if it is defined as the value added at constant 1970 factor cost per man/year, labour productivity in the manufacturing sector was characterized by its generally low level (between US\$1000 and 2400 in most of the countries), and a negative or unsatisfactory average annual growth rate in most African States (between -4.1 and +1.5 per cent). The Libyan Arab Jamahiriya recorded the best results with a level of productivity increasing from US\$5773 in 1970 to US\$9455 in 1980 which represents an average annual growth rate of 5.5 per cent. In the Ivory Coast, where the annual average growth rate was almost nil (0.3 per cent) during the period under review, labour productivity in the manufacturing sector was constantly above US\$4,000 except during the period 1976 to 1977 when it was between US\$3,821 and 3,805. Another example worth mentioning is Egypt where productivity rose by a yearly average of 10.2 per cent which was the highest growth rate recorded in the region increasing from US\$1,120 in 1970 to US\$2,857 in 1980: an average productivity of US\$2,044 for the whole period. In Ghana, Nigeria and Somalia on the other hand, the increase in the number of persons engaged in manufacturing kept pace with a rather considerable decline in productivity averaging -3.5 per cent.

31. The information available does not make it possible to draw conclusions regarding the causes of the levels or changes in productivity. Such causes could be the result of various factors such as the qualifications of workers or how hard they work, the increased use of capital goods and better quality raw materials, or the use of improved management methods.

32. Moreover, it is worth noting that according to a study carried out in 1971 by UNIDO ^{2/} the levels of labour productivity reached in 1963 in the manufacturing industries of the Ivory Coast and Zambia represented respectively 55.7 per cent and 39.8 per cent of the average productivity recorded in the industrialized countries. The UNIDO estimates mentioned a rate of 27.1 per cent with respect to Algeria as against 24.3 per cent for Tunisia and 21.6 per cent for Morocco.

^{1/} Only about 12 African countries calculate manufacturing production indexes.

^{2/} Industrial Development Survey, Volume III, 1971 (UNIDO)

33. In comparing data on productivity one should bear in mind the problems already mentioned in the first part of this study with respect to data coverage and quality, the selection of statistical units and the concepts used. Divergent methodologies and varying degrees of data reliability from one country to another could indeed cause major differences in the statistical series and have, consequently, a considerable impact on the comparability of data at the regional level.

Tableau 3.1/Table 3.1

Indices de la production des industries manufacturières (ensemble)/
Index numbers of manufacturing production (total)

1970 = 100

Pays/Countries	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
Algérie/Algeria	100	100	109	133	127	148	158	185	219	...	...
Égypte/Egypt	100	103	110	111	119	139	158	167	153	...	...
Ethiopie/Ethiopia	100	121	124	133	131	128	131	126	...	...	...
Ghana ^{1/}	...	...	...	...	...	...	...	100	81	68	69
Kenya	100	111	117	134	141	141	164	194	220	235	245
Malawi	100	111	124	149	198	182	180	202	222	224	225
Moroc/Morocco ^{2/}	...	...	63	92	94	100	106	114	121	121	126
Nigéria/Nigeria	100	115	124	153	147	182	234	238	273	404	424
Tunisie/Tunisia	100	111	120	126	134	135	143	154	166	180	189
Zaïre/Zaire	100	106	111	121	132	121	114	113	96	90	89
Zambie/Zambia	100	109	116	118	126	122	117	113	118	120	123
Zimbabwe	100	109	124	134	144	143	134	127	123	137	157

Sources: 1. Annuaire des Statistiques Industrielles de l'ONU (Tom I)/
United Nations Yearbook of Industrial Statistics (Volume I)

2. Publications nationales/National publications

1/ En ce qui concerne le Ghana, l'année de référence de l'indice est 1977/
The base year for Ghana is 1977

2/ En ce qui concerne le Maroc, l'année de référence de l'indice est 1975/
The base year for Morocco is 1975

Productions de certains produits caractéristiques des industries manufacturières dans la région (viande, sucre brut, boissons et ciment)/
Production of some characteristic commodities of manufacturing in the region
(meat, raw sugar, beverages and cement)

Pays/Countries	Viande (total)/Meat (total)				Sucre brut/Raw sugar			
	1977	1978	1979	1980	1977	1978	1979	1980
Algérie/Algeria	141	146	151	156	3.4	25	15	15
Angola	73	79	79	81	1.3	50	50	50
Congo	9	9	9	9	0.0	16	10	24
Côte d'Ivoire/Ivory Coast	96	103	109	115	7.4	37	32	63
Egypte/Egypt	421	427	426	435	1.1	657	600	620
Ethiopie/Ethiopia	490	501	505	511	1.4	137	161	163
Gabon	18	18	18	18	0.0	3	8	10
Ghana	98	105	114	126	8.7	25	20	15
Guinée/Guinea	29	30	31	33	4.4	13	15	20
Haute Volta/Upper Volta	47	54	54	57	6.8	30	31	27
Kenya	275	281	285	289	1.7	185	236	317
Madagascar	178	184	189	193	2.7	117	123	116
Malawi	30	30	29	30	0.03	95	97	103
Mali	103	104	108	109	1.9	15	25	16
Maroc/Morocco	214	222	230	243	4.3	239	398	360
Maurice/Mauritius	6	6	8	7	6.9	618	623	646
Mozambique	58	61	62	65	3.9	320	190	212
Nigéria/Nigeria	602	659	721	787	9.4	53	51	35
Ouganda/Uganda	146	148	148	152	1.4	12	8	10
Rép. U. du Cameroun/Un. Rep. of Cam.	93	96	96	101	2.8	35	37	57
Rép. U. de Tanzanie/Un. Rep. of Tanza.	189	196	199	209	3.4	108	136	123
Rwanda	23	24	24	25	2.8	1	1	2
Sénégal/Senegal	67	70	72	73	2.9	20	40	45
Somalie/Somalia	180	183	179	184	0.8	30	24	20
Soudan/Sudan	394	391	399	418	2.0	151	152	116
Swaziland	18	18	19	19	1.9	238	257	258
Tchad/Chad	51	51	51	51	0.0	15	20	24
Tunisie/Tunisia	97	91	80	93	-0.7	10	8	6
Zaire/Zaire	174	171	177	182	1.5	65	36	52
Zambie/Zambia	71	69	64	66	-2.3	70	59	58
Zimbabwe	175	186	175	165	-1.8	303	310	299

Sources: 1. Annuaire des Statistiques Industrielles de l'ONU (Tome II)/UN Yearbook of Industrial Statistics (Volume II)
2. Publications Nationales/National Publications

Tableau 3.2/Table 3.2

Production de certains produits caractéristiques des industries manufacturières dans la région (viande, sucre, brut, boissons et ciment)
 Production of some characteristic commodities of manufacturing in the region (meat, raw sugar, beverages and cement)

Pays/Countries	Boissons (total)/Beverages (total)					Ciment/Cement				
	En milliers d'hectolitres/ In thousand hectolitres					En milliers de tonnes/ In thousand tons				
	1977	1978	1979	1980	Taux de croissance moyen annuel/Average annual growth rate	1977	1978	1979	1980	Taux de croissance moyen annuel/Average annual growth rate
Algérie/Algeria	4252	3774	4753	4949	6.3	1777	2697	3774	4159	34.0
Angola	...	...	...	...	...	300	400	400	400	11.1
Botswana	48	37	93	112	52.1	-	-	-	-	-
Burundi	573	603	622	813	13.0	-	-	-	-	-
Cape Vert/Cape Verde	1	1	1	1	0.0	4	15	15	15	91.7
Congo	570	631	652	613	3.1	45	63	55	34*	-3.6
Côte d'Ivoire/Ivory Coast	1562	1310	1544	2541	22.1	875	964	1030	1118	8.5
Egypte/Egypt	...	...	...	...	...	3232	2422	2987	2994	13.2
Ethiopie/Ethiopia	974	1014	1000	1533	18.7	199	103	95	123	-8.8
Gabon	630	702	780	812	8.9	164	134	96	100	-14.2
Ghana	...	...	...	...	...	565	489	243	294	-14.8
Haute Volta/Upper Volta	424	519	626	764	21.7	-	-	-	-	-
Jamahiriya Arabe Libyenne Socialiste et Populaire/ Socialist People's Libyan Arab Jamahiriya	1263	823	925	834	-10.7	659	1079	1594	2482	55.7
Kenya	4000	4307	4665	5066	8.2	113	1156	1178	1228	2.6
Libéria/Liberia	244	260	308	341	11.9	107	132	185	108	8.5
Madagascar	...	...	...	...	...	52	60	63	60	5.2
Malawi	479	553	591	603	8.1	94	108	113	92	0.3
Mali	47	53	66	75	17.0	35	34	26	26	-8.8
Maroc/Morocco	1279	1548	1490	1470	5.3	2604	2819	3317	3561	11.1
Maurice/Mauritius	803	836	761	698	-4.4	-	-	-	-	-
Mozambique	...	...	...	...	...	323	327	273	277	-4.6
Niger	91	105	130	157	20.0	40	41	38	39	-0.7
Nigéria/Nigeria	4833	6783	6584	13179	45.9	1262	1289	1655	1714	11.4
Ouganda/Uganda	...	...	...	...	...	73	4	13	5	23.0
République centrafricaine/ Central African Republic	275	277	253	319	6.0	-	-	-	-	-

Tableau 3.2/Table 3.2

Productions de certains produits caractéristiques des industries manufacturières dans la région (vin, sucre brut, boissons et ciment) (Suite/Production of some characteristic commodities of manufacturing in the region (meat, raw sugar, beverages and cement (Continued))

Pays/Countries	Boissons (total)/Beverages (total)					Ciment/Cement				
	En milliers d'hectolitres/ In thousand hectolitres					En milliers de tonnes/ In thousand tons				
	1977	1978	1979	1980	Taux de croissance moyen annuel/average annual growth rate: 1977-1980	1977	1978	1979	1980	Taux de croissance moyen annuel/average annual growth rate
République Unie du Cameroun/ United Republic of Cameroon	2152	2745	2979	2409	5.7	270	403	148	227	11.7
République Unie du Tansanie/ United Republic of Tanzania	...	...	...	...	...	246	250	299	306	7.8
République du Bénin/ Republic of Benin	425	496	377	353	-3.6	-	-	-	-	-
Sénégal/Senegal	645	660	742	587	-2.1	329	357	330	371	4.2
Côte d'Ivoire/Ivory Coast	56	71	77	53	14.4	-	-	-	-	-
Sierra Leone	101	123	104	124	8.5	-	-	-	-	-
Soudan/Sudan	...	...	...	...	...	137	171	164	181	10.3
Libye/Libya	285	349	410	472	18.4	239	327	299	304	10.0
Tunisie/Tunisia	1914	1824	2234	2352	7.7	572	582	1383	1780	46.6
Zaïre/Zaire	...	...	...	...	...	542	475	454	399	-9.8
Zambie/Zambia	...	...	...	...	...	328	254	239	299	-1.1
Zimbabwe	525	950	950	963	1.4	436	404	391	469	-0.1

Sources: 1. Annuaire des Statistiques Industrielles de l'ONU (Tome II) /
United Nations Yearbook of Industrial Statistics (Volume II)

2. Publications nationales/National publications

Tableau 3.3/Table 3.3

Productivité du travail dans quelque pays Africains^{1/}
(secteur manufacturier moderne)
Labour productivity for selected African countries^{1/}
(modern manufacturing sector)

Pays/Countries	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	Productivité moyenne/ Average productivity	Taux de cr. moyen annuel/ Average an. growth rate
Côte d'Ivoire/Ivory Coast	4603	5052	4921	4835	4772	4110	3821	3805	4215	4701	4565	4445	0.3
Égypte/Egypt	1120	1145	1336	1595	1935	2000	2287	2495	2721	2945	2857	2044	10.2
Éthiopie/Ethiopia	1973	2062	2141	2055	1931	2004	2043	1946	1878	2271	2493	2072	2.7
Ghana	3545	3471	3269	3312	3156	2394	2652	3137	3329	2816	2243	3029	-3.6
Jamhəriyo Arabe Libyenne Socialiste et Populaire/ Socialist People's Libyan Arab Jamhəriya	5773	5839	5620	5361	6090	7625	8240	9488	10295	9825	9455	7683	5.5
Kenya	2035	2071	2015	2080	2309	2419	2177	2502	2499	2863	2662	2355	2.8
Madagascar	1607	1494	1622	1702	1689	1992	1451	1495	1570	1518	1445	1598	-0.4
Malawi	1272	1256	1348	1239	1363	1304	1264	1075	1016	1119	1015	1206	-3.4
Maurice/Mauritius	1000	1013	1143	1078	1161	1065	1059	1021	1155	1061	1125	1086	1.5
Nigérie/Nigeria	4077	3815	3839	3668	3267	2937	3082	2996	3016	3026	3041	3372	-2.7
République centrafricaine/ Central African Republic	1403	1387	1397	2153	2435	2230	2636	2021	1986	1895	1741	1935	3.9
Somalie/Somalia	2415	2347	2685	2489	2011	1947	1589	1702	1662	1534	1519	1991	-4.1
Soudan	2277	1940	2376	2008	2355	2605	3087	2577	2512	2381	2215	2394	0.7
Tunisie/Tunisia	1971	2170	2385	2176	2174	2186	2279	2320	2424	2386	2490	2269	2.5
Zimbabwe	2926	2766	3496	3588	3638	3638	3456	3415	3312	3173	3155	3324	1.6

^{1/} Valeur ajoutée brute aux coûts des facteurs constants de 1970 par année-homme
en dollars EU/
Gross value added at 1970 constant factor cost per man-year in US dollars

Source: Division de la Statistique de la CEA/ECA Statistics Division

4. Conclusions and recommendations

34. Since manufacturing industries account for more than a third of external trade and often contribute between 7 and 24 per cent of the domestic product, they undoubtedly play a key role in the development of the economies of African countries.

35. During the period under review, the modern manufacturing sector in a large majority of the countries of the region went through a boom which was characterized by a considerable growth in the number of establishments and persons engaged on the one hand, and, on the other hand, a substantial increase in the total volume of production. Production more than quadrupled in Nigeria and at least doubled in Kenya while average annual growth rates higher than 40 per cent were recorded in the production of some characteristic commodities of manufacturing in the region such as raw sugar, beverages and cement in Botswana, Cape Verde, the Ivory Coast and Tunisia.

36. However, the overall picture on the development of manufacturing industries in the region during the 1970s showed some inadequacies. The total volume of production in manufacturing industries dropped considerably in Ghana and Zaire (30 and 11 per cent respectively), and the same occurred in Algeria, Mozambique and the Upper Volta (an average annual decrease of more than 10 per cent) with respect to the production of some basic products including sugar, cement, fuel, oil, cigarettes and plywood. Moreover, the levels of productivity were generally low (between US\$1,000 and 2,400 in most cases) and annual average growth rates were negative or unsatisfactory in the majority of African States (between -4.1 and 1.5 per cent).

37. Moreover, the world distribution of value added in the manufacturing sector during the 1970-1990 period indicates a rather slow growth in Africa whose value added increased from 0.83 to 0.97 on the average as against 0.59 to 0.73 per cent for Western Asia, 2.18 to 3.14 per cent for Southern and Eastern Asia and 5.15 to 6.14 per cent for Latin America. Similarly, Africa's share in the world production of raw sugar slightly increased between 1970 and 1980 (3.7 to 4.2 per cent), while there was a clear drop in its share of world cement production (1 to 0.7 per cent) and its share of world cigarette production was almost stagnant (1.2 to 1.1 per cent).

38. With respect to methodological problems, it should be stressed that the study was greatly hampered by the generally bad quality of data, the complete lack of information on small and medium scale industries and the occasionally divergent concepts and definitions used by the countries. In most cases, it was not possible to have an accurate idea of the share of the modern sector in national economies. Nor was it possible to obtain the slightest data on the characteristics of enterprises and establishments, especially their sizes, the extent of integration of their technical operations and plant capacity, their system of ownership, legal organization and product distribution methods. What is more, the sectoral deflators available were unreliable and they had to be adjusted as much as possible in order to prepare the series on outputs at constant prices.

39. In order to correct this situation, the countries of the region are urged to participate in the 1983 world programme of industrial statistics which is no doubt an effective means of obtaining a detailed and comprehensive picture of the structure and activities of the industrial sector as a whole and gradually to establish integrated national systems of industrial statistics. If African countries are unable to participate in the above programme, they should at least give priority to carrying out economic census programmes while continuing with the organization of annual surveys.

40. The development of productivity statistics will depend to a large extent on the improvement of national labour statistics. Inasmuch as preference should be given to estimating value added at constant factor cost because it is more meaningful and easier to compare at the international level, emphasis should be placed on looking for comprehensive and reliable data on the value of goods and services produced, intermediate consumption and indirect taxes less subsidies. With respect to employment, statistical surveys should not be restricted to the number of persons engaged but should cover the number of days worked and the distribution of workers by social and professional categories. At the same time, efforts should be made to design sectoral deflators and appropriate conversion rates of purchasing power for each of the major aggregate levels.

41. Finally, in order to present data that can be compared to the various levels of aggregation, it is recommended that countries should use the revised version of the International Standard Industrial Classification of all economic activities (ISIC).